



Contribution ID : 184

Type : Oral

The High Performance Macromolecular Crystallography (MX3) Beamline

Friday, 26 November 2021 14:00 (15)

The MX3 beamline will extend the capabilities of the existing suite of MX beamlines at the Australian Synchrotron. It will allow collection on crystals that are too small or weakly diffracting for the current beamlines. A high level of automation will transform membrane protein micro crystal collection and high throughput projects such as drug and fragment screening. Sample positioning will be provided via an MD3-UP goniometer and an ISARA robot will allow 6 second sample exchange. Serial crystallography capability will be provided using in-tray screening and collection and fixed target silicon chip scanning stages. A dedicated cluster will provide real-time data processing and automated data collection will be standard. This will include automated location of crystals from a rastered volume with subsequent data collection on each crystal with resulting automated data merging from multiple crystals.

Some outstanding questions for the user community relate to time-resolved crystallography, and injector experiment capabilities; options will be presented and discussed.

Level of Expertise

Expert

Presenter Gender

Man

Pronouns

He/Him

Which facility did you use for your research

Australian Synchrotron

Students Only - Are you interested in AINSE student funding

No

Do you wish to take part in the Student Poster Slam

No

Condition of submission

Yes

Primary author(s) : ERIKSSON, Daniel (Australian Synchrotron); CARADOC-DAVIES, Tom (Australian Synchrotron.)

Co-author(s) : MAGOULAS, Christina (Australian Synchrotron); WONG, Danny; HERNANDEZ VIVANCO, Francisco (Australian Synchrotron); CHERUKUVADA, Hima (Australian Synchrotron); CAIN, Nicole (Australian Synchrotron); ROSTAN, Robert (Australian Synchrotron); NUTHALAPATI, Sandeep (Australian Synchrotron)

Presenter(s) : ERIKSSON, Daniel (Australian Synchrotron)

Session Classification : Instruments & Techniques

Track Classification : Instruments & Techniques